

REMARKS

Entry of the foregoing and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

Claims 1-14 were pending in this application. In this response, claims 1 and 5 are amended, claim 6 canceled and no claim added. Thus, claims 1-5 and 7-14 are now pending.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: the original claims and the specification, page 6, lines 7-11.

REJECTIONS UNDER 35 U.S.C. § 112

Claims 1-14 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons presented at page 2 of the Official Action. Claims 1 and 5 have been amended to eliminate the allegedly vague and confusing language. Thus, the rejections are now moot, and should be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,913,604 to Zaengerle (hereafter "*Zaengerle*") in view of U.S. Reissue Patent No. RE. 21068 to Miller (hereafter "*Miller*") and U.S. Patent No. 4,946,318 to David et al. (hereafter "*David*") and further in view of WO 2004/062839 to Sakamoto et al. (hereafter "*Sakamoto*") on the grounds set forth at page 2 of the Office Action. The Examiner alleges that *Zaengerle* discloses a cutting insert having a toothed edge, but admits that *Zaengerle* fails to disclose

serrations arranged on either of the main surfaces. *See, e.g.*, page 3 of the Office Action dated July 21, 2009. The Examiner also alleges that it would have been obvious from the disclosure of *Miller* that serrations would be added to one main surface of an insert where the serrations extend parallel to a cutting edge side. The Examiner further alleges that it would have been obvious from the disclosure of *Sakamoto* to add serrations on both sides of the main surface.

Applicants respectfully traverse the rejection. Claim 5 recites “wherein the cutting insert has serrations on both the main surfaces thereof” and “the serrations extend parallel to the toothed edge side of the cutting insert.” None of the cited references disclose at least this combination of elements. Specifically, *Zaengerle* and *David* fail to disclose any serrations on main surfaces of a cutting insert. *Miller* discloses serrations on only one main surface, and *Sakamoto* discloses serrations that extend perpendicular to the toothed edge side of the cutting insert. No *prima facie* case of obviousness is established by a combination of the four cited references for at least the following reasons.

The Office’s objective analysis of obviousness should be made explicit. *See KSR Int’l Co. v. Teleflex, Inc.*, 82 U.S.P.Q.2d 1385, 1396 (2007); *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). The MPEP provides exemplary rationales for supporting legal conclusions of obviousness. One element required in each of the exemplary rationales is that there must be a showing that the proposed combination would lead to predictable results. *See*, MPEP § 2143. Applicants submit that the Examiner has failed to show that the proposed combination would lead to predictable results.

The Examiner appears to propose modifying *Zaengerle* to include serrations on both main surfaces, wherein the serrations extend parallel to the toothed edge side of the cutting insert as recited in claim 5, based on the disclosures of *Miller* and *Sakamoto*. Serration is added to one main surface of *Miller* to insure a firmer connection between the insert and insert seat when a wedge block is forced outward to press the insert against the insert seat. Serration is added to at least two opposing surfaces of *Sakamoto* to improve rigidity of the insert when connected to a cutting head via placement within an insert seat comprising two opposing surfaces. *See, e.g.,* Figure 28. First, the Examiner has provided no evidence that the rigidity benefit of having two opposing surfaces of an insert with serrations would also occur in a slot milling cutter insert seat where the insert is not clamped between two opposing surfaces. Second, the Examiner has provided no evidence that the rigidity benefit would also occur when the serrations extend parallel to the cutting edge face as opposed to perpendicular as in *Sakamoto*. Therefore, the Examiner fails to provide a rationale for the predictability of the combination proposed for at least the above reason.

Additionally, *Miller*, which the Examiner relies on for providing an alleged reason for adding serrations extending parallel to the toothed edge side, teaches away from applying serrations to both main surfaces. The reason for adding serrations as taught by *Miller* is to insure a firmer connection between insert and insert seat when a wedge block is forced outwardly from the slot to press the insert against the insert seat. However, to meet this purpose of *Miller* the serrations can only be added to the main surface facing the insert seat and not the opposing main surface.

Specifically, *Miller* discloses serrations only on one main surface for engaging with corresponding serrations on the adjacent wall of the groove or slot. *See, e.g.,* p. 1, col. 1, ll. 35-

39. *Miller* adds a wedge block and set screw to the insert system of a rotary cutter to provide that the inserts are securely held against endwise and edgewise shifting. *See, e.g.*, p. 1, col. 1, ll. 7-13. The main surface of the insert adjacent the wedge block is smooth or flat, and cannot contain any serrations, especially serrations that are parallel to the cutting side surface, which the Examiner has compared to a side tooth edge surface. *See, e.g.*, p.1, col. 2, ll. 6-12. To hold the inserts tightly within the slots, the set screw pushes the wedge block outwardly from the slot, and thus the wedge block slides along the adjacent main surface of the insert. *See, e.g.*, p. 1, col. 1, ll. 40-54. If, as suggested by the Examiner, a serrated surface having serrations extending parallel to the cutting side edge were added to an insert such as *Miller*, then the intended purpose of tightening the insert into the slot via the wedge block would not be possible, much less satisfactory. Note that the MPEP notes that a combination of references resulting in a prior art reference being unsatisfactory for its intended purpose is improper. *See*, MPEP § 2143.01. Additionally, at least because *Miller* teaches away from an embodiment where serrations extending parallel to the cutting edge surface are on both main surfaces of the insert and no other cited reference discloses such an embodiment, such a modification would not have been predictable. Thus, no *prima facie* case of obviousness is established.

Dependent claims 7 and 8, which depend from claim 5, are also not obvious for at least reasons similar to those for claim 5. For at least these reasons the rejection should be withdrawn.

ALLOWABLE SUBJECT MATTER

Applicants appreciate the indication of allowable subject matter in claim 1 if rewritten or amended to overcome the rejections under 35 U.S.C. § 112, Second Paragraph, set forth in this Office Action. Applicants further appreciate the indication that claims 2-4 and 9-14 would be

allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, Second Paragraph, set forth in this Office Action. In response, claim 1 has been rewritten to overcome the 35 U.S.C. § 112, Second Paragraph rejection. Accordingly, Applicants respectfully request allowance for at least claims 1-4 and 9-14.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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